

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An apparatus for monitoring a size of a particle, comprising:
(a) a laser beam source which radiates a laser beam to an area in which particles exist;
(b) a photodetector which is comprised of a plurality of pixels, which receives said laser beam having been scattered by said particles, and outputs image data including brightness of pixels; and

41 (c) an area detector which determines pixels located adjacent to each other among pixels having a brightness equal to or greater than a predetermined threshold brightness, as a group of pixels corresponding to an area on which a laser beam scattered by a particle is incident. ~~detects pixels corresponding to an area on which said scattered laser beam is incident, based on said image data;~~

(d) ~~a maximum brightness detector which detects a maximum brightness among brightness of said pixels detected by said area detector; and~~

(e) ~~a measurement unit which compares said maximum brightness to a predetermined threshold brightness to thereby measure a relative size of said particles.~~

2. (currently amended): The apparatus as set forth in claim 1, further comprising:
a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group; and

a measurement unit which compares said maximum brightness to said predetermined threshold brightness to thereby measure a relative size of said particles. ~~wherein said area detector first determines a threshold brightness to which brightness of pixels are to be compared, judges whether a brightness of a pixel is equal to or greater than said threshold brightness, and determines pixels located adjacent to each other among pixels having been judged to have a brightness equal to or greater than said threshold brightness, as pixels corresponding to an area on which a laser beam scattered by a particle is incident.~~

41 3. (currently amended): The apparatus as set forth in claim 1, further comprising:

a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group; and

a measurement unit which measures an intensity of said scattered laser beam, based on said maximum brightness, and measures a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles. ~~a second measurement unit which measures an intensity of said scattered laser beam, based on said maximum brightness, and measures a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.~~

4. (currently amended): The apparatus as set forth in claim 3, wherein said particles are generated in fabrication of a semiconductor device, and further comprising a third measurement unit which judges whether said a relative size of said particles is greater than a predetermined threshold size in order to judge whether said particles would exert harmful

influence on a semiconductor device, and which ceases fabrication of a semiconductor device, if said relative size of said particles has been judged to be greater than said predetermined threshold size.

5. (original): The apparatus as set forth in claim 1, further comprising a scanner which scans said laser beam emitted from said laser beam source.

6. (original): The apparatus as set forth in claim 1, wherein said photodetector includes a charge coupled device camera comprised of a plurality of light-receiving devices arranged in a matrix.

7. (currently amended): The apparatus as set forth in claim 2, further comprising a counter which counts up a number of said groups. ~~a particle counter which counts up each time said particle counter receives a signal from said area detector and transmits a signal indicative of a count, to said measurement unit.~~

8. (original): The apparatus as set forth in claim 1, further comprising a heater for heating a chamber in which said particle is generated, to remove by-products from said chamber.

9. (currently amended): ~~An~~ The apparatus for monitoring a size of a particle as set forth in claim 1, further comprising:

a counter which counts a number of pixels in said group; and

a measurement unit which compares said number to a predetermined threshold number to thereby measure a relative size of said particles.

~~(a) a laser beam source which radiates a laser beam to an area in which particles exist,
(b) a photodetector receiving said laser beam having been scattered by said particles,
and outputting image data including brightness of pixels;~~

~~(c) an area detector which detects pixels corresponding to an area on which said scattered laser beam is incident, based on said image data;~~

~~(d) a counter which counts the number of said pixels detected by said area detector;~~
and

~~(e) a measurement unit which compares said number of said pixels to a predetermined threshold number to thereby measure a relative size of said particles.~~

10. (currently amended): The apparatus as set forth in claim 1, 9, further comprising a counter which counts up a number of said groups, ~~wherein said area detector first determines a threshold brightness to which brightness of pixels are to be compared, judges whether a brightness of a pixel is equal to or greater than said threshold brightness, and determines pixels located adjacent to each other among pixels having been judged to have a brightness equal to or greater than said threshold brightness, as pixels corresponding to an area on which a laser beam scattered by a particle is incident.~~

11. (original): The apparatus as set forth in claim 9, further comprising a scanner which scans said laser beam emitted from said laser beam source.

12. (original): The apparatus as set forth in claim 9, wherein said photodetector includes a charge coupled device camera comprised of a plurality of light-receiving devices arranged in a matrix.

13. (currently amended): The apparatus as set forth in claim 9, further comprising a counter which counts up a number of said groups. ~~a particle counter which counts up each time said particle counter receives a signal from said area detector, and transmits a signal indicative of a count, to said measurement unit;~~

14. (original): The apparatus as set forth in claim 9, further comprising a heater for heating a chamber in which said particle is generated, to remove by-products from said chamber.

15. (currently amended): ~~An~~ The apparatus for monitoring a size of a particle as set forth in claim 1, further comprising:

a calculator which calculates a total of brightness of pixels in said group; and
a measurement unit which compares said total to a predetermined threshold total to thereby measure a relative size of said particles.

~~(a) a laser beam source which radiates a laser beam to an area in which particles exist;~~

~~(b) a photodetector receiving said laser beam having been scattered by said particles, and outputting image data including brightness of pixels;~~

~~(c) an area detector which detects pixels corresponding to an area on which said scattered laser beam is incident, based on said image data;~~

~~(d) a calculator which calculates a total of brightness of said pixels detected by said area detector; and~~

~~(e) a measurement unit which compares said total to a predetermined threshold brightness to thereby measure a relative size of said particles.~~

16. (canceled)

17. (currently amended): The apparatus as set forth in claim 1-15, further comprising:
a maximum brightness detector which detects a maximum brightness among levels of
brightness of pixels in said group;

a counter which counts a number of pixels in said group; and
a measurement unit which compares said maximum brightness or said number to a
predetermined threshold brightness or a predetermined threshold number to thereby measure
a relative size of said particles.

~~wherein said calculator is comprised or~~

~~(d1) a maximum brightness detector which detects a maximum brightness among~~
~~brightness of said pixels detected by said area detector; and~~

~~(d2) a counter which counts the number of said pixels detected by said area detector;~~
~~and wherein said measurement unit compares said maximum brightness or said~~
~~number of said pixels to a predetermined threshold brightness or a predetermined threshold~~
~~number to thereby measure a relative size of said particles.~~

18. (currently amended): The apparatus as set forth in claim 1-15, further comprising:

a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group;

a counter which counts a number of pixels in said group;

a calculator which calculates a total of brightness of pixels in said group; and

a measurement unit which uses at least one of said total and said maximum brightness and said number in order to measure a relative size of said particles.

~~wherein said calculator is comprised of;~~

~~(d1) a maximum brightness detector which detects a maximum brightness among brightness of said pixels detected by said area detector; and~~

~~(d2) a counter which counts the number of said pixels detected by said area detector; and wherein said measurement unit uses said total and at least one of said maximum brightness and said number of said pixels for measuring a relative size of said particles.~~

19. (original): The apparatus as set forth in claim 15, further comprising a scanner which scans said laser beam emitted from said laser beam source.

20. (original): The apparatus as set forth in claim 15, wherein said photodetector includes a charge coupled device camera comprised of a plurality of light-receiving devices arranged in a matrix.

21. (currently amended): The apparatus as set forth in claim 15, further comprising a counter which counts up a number of said groups. ~~a particle counter which counts up each time said particle counter receives a signal from said area detector, and transmits a signal indicative of a count, to said measurement unit.~~

22. (original): The apparatus as set forth in claim 15, further comprising a heater for heating a chamber in which said particle is generated, to remove by-products from said chamber.

23. (currently amended): ~~An~~ The apparatus for monitoring a size of a particle as set forth in claim 1, further comprising:

a first measurement unit which measures an intensity of said scattered laser beam, based on brightness of pixels in said group; and

a second measurement unit which measures a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.

~~(a) a laser beam source which radiates a laser beam to an area in which particles exist;~~
~~(b) a photodetector receiving said laser beam having been scattered by said particles, and outputting image data including brightness of pixels;~~

~~(c) an area detector which detects pixels corresponding to an area on which said scattered laser beam is incident, based on said image data;~~

~~(d) a first measurement unit which measures an intensity of said scattered laser beam, based on brightness of said pixels detected by said area detector; and~~

~~(e) a second measurement unit which measures a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.~~

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24. (currently amended): The apparatus as set forth in claim 23, wherein said first measurement unit comprises a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group, and said first measurement unit measures an intensity of said scattered laser beam, based on said maximum brightness.~~said area detector first determines a threshold brightness to which brightness of pixels are to be compared judges whether a brightness of a pixel is equal to or greater than said threshold brightness and determines pixels located adjacent to each other among pixels having been judged to have a brightness equal to or greater than said threshold brightness, as pixels corresponding to an area on which a laser beam scattered by a particle is incident.~~

25. (currently amended): The apparatus as set forth in claim 23, wherein said particles are generated in fabrication of a semiconductor device, and further comprising a third measurement unit which judges whether ~~said a~~ relative size of said particles is greater than a predetermined threshold size in order to judge whether said particles would exert harmful influence on a semiconductor device, and which ceases fabrication of a semiconductor device, if said relative size of said particles has been judged to be greater than said predetermined threshold size.

26. (original): The apparatus as set forth in claim 23, further comprising a scanner which scans said laser beam emitted from said laser beam source.

27. (original): The apparatus as set forth in claim 23, wherein said photodetector includes a charge coupled device camera comprised of a plurality of light-receiving devices arranged in a matrix.

28. (currently amended): The apparatus as set forth in claim 23, further comprising a counter which counts up a number of said groups ~~a particle counter which counts up each time said particle counter receives a signal from said area detector, and transmits a signal indicative of a count to said measurement unit.~~

29. (original): The apparatus as set forth in claim 23, wherein said second measurement unit includes a memory which stores a software program used for calculating a size of a particle in accordance with the equation of Rayleigh scattering, and a threshold size to which a calculated size is to be compared.

30. (original): The apparatus as set forth in claim 29, wherein said threshold size is equal to or smaller than a minimum diameter among diameters of wirings in a semiconductor device to be fabricated.

31. (original): The apparatus as set forth in claim 23, further comprising a heater for heating a chamber in which said particle is generated, to remove by-products from said chamber.

32. (currently amended): A method of monitoring a size of a particle, comprising the steps of:

(a) radiating a laser beam to an area in which particles exist;

(b) ~~receiving said laser beam having been scattered by said particles, and outputting image data including brightness of pixels~~ with a photodetector comprised of a plurality of pixels, and creating image data including brightness of said pixels;

(c) ~~determining pixels located adjacent to each other among pixels having a brightness equal to or greater than a predetermined threshold brightness as a group of pixels corresponding to an area on which a laser beam scattered by a particle is incident, detecting pixels corresponding to an area on which said scattered laser beam is incident based on said image data;~~

(d) ~~detecting a maximum brightness among brightness of said pixels detected in said step (c);~~
and

(e) ~~comparing said maximum brightness to a predetermined threshold brightness to thereby measure a relative size of said particles;~~

33. (currently amended): The method as set forth in claim 32, ~~wherein said step (e) includes the steps of~~ further comprising:

detecting a maximum brightness among levels of brightness of pixels in said group;
and

comparing said maximum brightness to a predetermined threshold brightness to thereby measure a relative size of said particles.

(e1) ~~determining a threshold brightness to which brightness of pixels are to be compared;~~

(e2) ~~judging whether a brightness of a pixel is equal to or greater than said threshold brightness and~~

~~(c3) determining pixels located adjacent to each other among pixels having been judged to have a brightness equal to or greater than said threshold brightness, as pixels corresponding to an area on which a laser beam scattered by a particle is incident~~

34. (currently amended): The method as set forth in claim 32, further comprising the steps of:

detecting a maximum brightness among levels of brightness of pixels in said group;

and

measuring an intensity of said scattered laser beam based on said maximum

brightness.

~~measuring an intensity of said scattered laser beam, based on said maximum brightness; and~~

~~measuring a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.~~

35. (currently amended): The method as set forth in claim 34, wherein said particles are generated in fabrication of a semiconductor device, and further comprising the steps of:

judging whether ~~said~~ a relative size of said particles is greater than a predetermined threshold size in order to judge whether said particles would exert harmful influence on a semiconductor device; and

ceasing fabrication of a semiconductor device, if said relative size of said particles has been judged to be greater than said predetermined threshold size.

36. (original): The method as set forth in claim 35, further comprising the step of heating a chamber in which said particles are generated, for removing by-products from said chamber.

37. (original): The method as set forth in claim 32, further comprising the step of scanning said laser beam.

38. (currently amended): The method as set forth in claim ~~33~~ 32, further comprising:
the step of
counting up a number of said groups, ~~each time of receiving a signal transmitted~~
~~in said step (c), and transmitting a signal indicative of a count.~~

39. (currently amended): ~~A~~ The method of monitoring a size of a particle as set forth in claim 32, comprising the steps of:
counting a number of pixels in said group; and
comparing said number to a predetermined threshold number to thereby measure a relative size of said particles.

- ~~(a) radiating a laser beam to an area, in which particles exist;~~
- ~~(b) receiving said laser beam having been scattered by said particles, and outputting image data including brightness of pixels;~~
- ~~(c) detecting pixels corresponding to an area on which said scattered laser beam is incident, based on said image data;~~
- ~~(d) counting the number of said pixels detected in said step (c); and~~

~~(e) comparing said number of said pixels to a predetermined threshold number to thereby measure a relative size of said particles.~~

40. (canceled)

41. (original): The method as set forth in claim 39, further comprising the step of scanning said laser beam.

42. (currently amended): The method as set forth in claim 39, further comprising ~~the step of counting up a number of said groups each time of receiving a signal transmitted in said step (c), and transmitting a signal indicative of a count.~~

43. (currently amended): ~~A~~ The method of monitoring size of a particle as set forth in claim 32, comprising the steps of:

calculating a total of brightness of pixels in said group; and

comparing said total to a predetermined threshold brightness to thereby measure a relative size of said particles.

~~{(a) radiating a laser beam to an area in which particles exist;~~

~~(b) receiving said laser beam having been scattered by said particles, and outputting image data including brightness of pixels;~~

~~(c) detecting pixels corresponding to an area on which said scattered laser beam is incident, based on said image data;~~

~~(d) calculating a total of brightness of said pixels detected in said step (c);~~

and

~~(e) comparing said total to a predetermined threshold brightness to thereby measure a relative size of said particles.~~

44. (canceled)

45. (original): The method as set forth in claim 43, wherein said particles are generated in fabrication of a semiconductor device, and further comprising the steps of:

judging whether said relative size of said particles is greater than a predetermined threshold size in order to judge whether said particles would exert harmful influence on a semiconductor device; and

ceasing fabrication of a semiconductor device, if said relative size of said particles has been judged to be greater than said predetermined threshold size.

46. (original): The method as set forth in claim 43, further comprising the step of heating a chamber in which said particles are generated, for removing by-products from said chamber.

47. (original): The method as set forth in claim 43, further comprising the step of scanning said laser beam.

48. (currently amended): The method as set forth in claim 43, further comprising ~~the step of counting up a number of said groups each time of receiving a signal transmitted in said step (c), and transmitting a signal indicative of a count,~~

49. (currently amended): The method as set forth in claim 43, ~~wherein said step (e)~~ includes further comprising the step of storing a software program used for calculating a size of a particle in accordance with the equation of Rayleigh scattering, and a threshold size to which a calculated size is to be compared.

50. (original): The method as set forth in claim 49, wherein said threshold size is equal to or smaller than a minimum diameter among diameters of wirings in a semiconductor device to be fabricated.

14 51. (currently amended): ~~A The method of monitoring a size of a particle as set forth in claim 32, comprising the steps of:~~

measuring an intensity of said scattered laser beam, based on brightness of pixels in said group; and

measuring a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.

~~(a) radiating a laser beam to an area in which particles exist;~~

~~(b) receiving said laser beam having been scattered by said particles, and outputting image data including brightness of pixels;~~

~~(c) detecting pixels corresponding to an area on which said scattered laser beam is incident, based on said image data;~~

~~(d) measuring an intensity of said scattered laser beam, based on brightness of said pixels detected in said step (c); and~~

~~(e) measuring a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.~~

52. (canceled)

53. (original): The method as set forth in claim 51, wherein said particles are generated in fabrication of a semiconductor device, and further comprising the steps of:

judging whether said relative size of said particles is greater than a predetermined threshold size in order to judge whether said particles would exert harmful influence on a semiconductor device; and

ceasing fabrication of a semiconductor device, if said relative size of said particles has been judged to be greater than said predetermined threshold size.

54. (original): The method as set forth in claim 53, further comprising the step of heating a chamber in which said particles are generated, for removing by-products from said chamber.

55. (original): The method as set forth in claim 51, further comprising the step of scanning said laser beam.

56. (currently amended): The method as set forth in claim 51, further comprising ~~the step of counting up a number of said groups each time, of receiving a signal transmitted in said step (c), and transmitting a signal indicative of a count.~~

57. (currently amended): The method as set forth in claim 51, ~~wherein said step (e)~~
includes further comprising the step of storing a software program used for calculating a size
of a particle in accordance with the equation of Rayleigh scattering, and a threshold size to
which a calculated size is to be compared.

58. (original): The method as set forth in claim 57, wherein said threshold size is
equal
to or smaller than a minimum diameter among diameters of wirings in a semiconductor
device to be fabricated.

59-102. (canceled)

103. (new): A recording medium readable by a computer, storing a program therein
for causing a computer to act as an apparatus for monitoring a size of a particle, said
apparatus comprising:

a laser beam source which radiates a laser beam to an area in which particles exist;
a photodetector which is comprised of a plurality of pixels, wherein said
photodetector receives said laser beam having been scattered by said particles, and outputs
image data including brightness of pixels; and

an area detector which determines pixels located adjacent to each other among pixels
having a brightness equal to or greater than a predetermined threshold brightness, as a group
of pixels corresponding to an area on which said laser beam scattered by a particle is incident.

104. (new): The recording medium as set forth in claim 103, wherein said apparatus further comprises:

a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group; and

a measurement unit, which compares said maximum brightness to a predetermined threshold brightness to thereby measure a relative size of said particles.

105. (new) The recording medium as set forth in claim 103, wherein said apparatus further comprises:

a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group; and

a measurement unit which measures an intensity of said scattered laser beam, based on said maximum brightness, and measures a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.

106. (new): The recording medium as set forth in claim 103, wherein said particles are generated in fabrication of a semiconductor device, and wherein said apparatus further includes a measurement unit which judges whether a relative size of said particles is greater than a predetermined threshold size in order to judge whether said particles would exert harmful influence on said semiconductor device, and which ceases fabrication of said semiconductor device, if said relative size of said particles has been judged to be greater than said predetermined threshold size.

107. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes a particle counter which counts up each time said particle counter receives a signal from said area detector, and transmits a signal indicative of a count, to a measurement, unit.

108. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes a heater for heating a chamber in which said particle is generated, to remove by-products from said chamber.

109. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes a counter which counts up a number of said groups.

110. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes:

a counter which counts a number of pixels in said group; and
a measurement unit which compares said number to a predetermined threshold number to thereby measure a relative size of said particles.

111. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes a scanner which scans said laser beam emitted from said laser beam source.

112. (new): The recording medium as set forth in claim 103, wherein said photodetector includes a charge coupled device camera comprised of a plurality of light-receiving devices arranged in a matrix.

113. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes:

a calculator which calculates a total of brightness of pixels in said group;

and

a measurement unit which compares said total to a predetermined threshold total to thereby measure a relative size of said particles.

114. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes:

a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group;

a counter which counts a number of pixels in said group; and

a measurement unit which compares said maximum brightness or said number to a predetermined threshold brightness, or a predetermined threshold number, to thereby measure a relative size of said particles.

115. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes:

a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group;

a counter which counts a number of pixels in said group;
a calculator which calculates a total of brightness of pixels in said group; and
a measurement unit which uses at least one of said total and said maximum brightness and said number in order to measure a relative size of said particles.

116. (new): The recording medium as set forth in claim 103, wherein said apparatus further includes:

a first measurement unit which measures an intensity of said scattered laser beam, based on brightness of pixels in said group; and

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a second measurement unit which measures a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.

117. (new): The recording medium as set forth in claim 116, wherein said first measurement unit comprises a maximum brightness detector which detects a maximum brightness among levels of brightness of pixels in said group, and said first measurement unit measures an intensity of said scattered laser beam, based on said maximum brightness.

118. (new): The recording medium as set forth in claim 116, wherein said second measurement unit includes a memory which stores a software program used for calculating a size of a particle in accordance with the equation of Rayleigh scattering, and a threshold size to which a calculated size is to be compared.

119. (new): A recording medium readable by a computer, storing a program therein

for causing a computer to carry out a method of monitoring a size of a particle, said method comprising:

radiating a laser beam to an area in which particles exist;
receiving said laser beam having been scattered by said particles;
determining pixels located adjacent to each other among pixels having a brightness equal to or greater than a predetermined threshold brightness, as a group of pixels corresponding to an area on which said laser beam scattered by a particle is incident.

11 120. (new): The recording medium as set forth in claim 119, wherein said method further includes:

detecting a maximum brightness among levels of brightness of pixels in said group;
and
comparing said maximum brightness to a predetermined threshold brightness to thereby measure a relative size of said particles.

121. (new): The recording medium as set forth in claim 119, wherein said method further includes:

detecting a maximum brightness among levels of brightness of pixels in said group;
and
measuring an intensity of said scattered laser beam, based on said maximum brightness.

122. (new): The recording medium as set forth in claim 119, wherein said particles are generated in fabrication of a semiconductor device, and wherein said method further includes:

judging whether a relative size of said particles is greater than a predetermined threshold size in order to judge whether said particles would exert harmful influence on said semiconductor device; and

ceasing fabrication of said semiconductor device, if said relative size of said particles has been judged to be greater than said predetermined threshold size.

A1 123. (new): The recording medium as set forth in claim 122, wherein said method further includes heating a chamber in which said particles are generated, for removing by-products from said chamber.

124. (new): The recording medium as set forth in claim 119, wherein said method further includes counting up a number of said groups.

125. (new): The recording medium as set forth in claim 119, wherein said method further includes:

counting a number of pixels in said group; and
comparing said number to a predetermined threshold number to thereby measure a relative size of said particles.

126. (new): The recording medium as set forth in claim 119, wherein said method further includes scanning said laser beam.

127. (new): The recording medium as set forth in claim 119, wherein said method further includes:

calculating a total of brightness of pixels in said group; and

comparing said total to a predetermined threshold brightness to thereby measure a relative size of said particles.

128. (new): The recording medium as set forth in claim 119, wherein said method further includes storing a software program used for calculating a size of a particle in accordance with the equation of Rayleigh scattering, and a threshold size to which a calculated size is to be compared.

129. (new): The recording medium a set forth in claim 119, wherein said method further includes:

measuring an intensity of said scattered laser beam, based on brightness of pixels in said group; and

measuring a relative size of said particles, based on said intensity of said scattered laser beam, in accordance with an equation which defines a relation between an intensity of a scattered laser beam and a relative size of particles.
